



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/593,461

09/19/2006

Peter Herold

2006_1381A

8997

513

7590

12/03/2008

WENDEROTH, LIND & PONACK, L.L.P.

2033 K STREET N. W.

SUITE 800

WASHINGTON, DC 20006-1021

EXAMINER

SHIAO, REI TSANG

ART UNIT

PAPER NUMBER

1626

MAIL DATE

DELIVERY MODE

12/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,461	Applicant(s) HEROLD ET AL.	
	Examiner REI-TSANG SHIAO	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

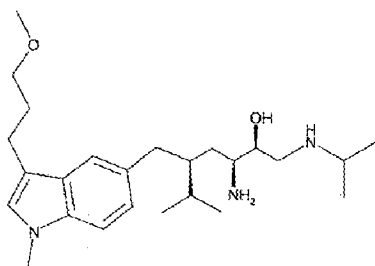
- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/19/06</u> . | 6) <input type="checkbox"/> Other: _____ |

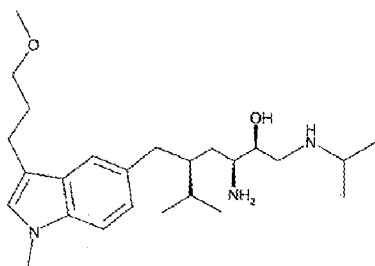
DETAILED ACTION

1. This application claims benefit of the foreign applications:
SWITZERLAND 00479/04 with a filing date 03/19/2004.
2. Claims 1-12 are pending in the application.

Responses to Election/Restriction

3. Applicant's election with traverse of election of Group III claims 1-12, in part, in the reply filed on August 29, 2008 is acknowledged. Election of the compound of



Example 3A, i.e., , as the single species is also acknowledged. The traversal is on the grounds that the prior art (i.e., CAS:108:204491) compound have nothing in common with the instantly claimed compounds. This is found not persuasive, and the reasons are given *infra*.

Claims 1-12 are pending in the application. The scope of the invention of the elected subject matter is as follows.

Claims 1-12, in part, drawn to compounds/compositions of formula (I), wherein the variable R₆ represents indole or naphthalene, pyridyl or quinolinyl thereof, and when R₁ and R₂ and the nitrogen atom to which they are bonded form a heterocycle ring piperidine thereof, and methods of use.

The claims 1-12 herein lack unity of invention under PCT rule 13.1 and 13.2 since the compounds defined in the claims lack a significant structural element qualifying as the special technical feature that defines a contribution over the prior art, see TenBrink et al. US 7,312,360. TenBrink et al. disclose similar hydroxyethylamines compounds of formula (I). Accordingly, unity of invention is considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper. Furthermore, even if unity of invention under 37 CFR 1.475(a) is not lacking, which it is lacking, under 37 CFR 1.475(b) a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations:

- (1) A product and a process specially adapted for the manufacture of said product', or
 - (2) A product and a process of use of said product; or
 - (3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product; or
 - (4) A process and an apparatus or means specifically designed for carrying out the said process; or
 - (5) A product, a process specially adapted for the manufacture of the said product, and an apparatus or means specifically designed for carrying out the said process.
- And, according to 37 CFR 1.475(c)

if an application contains claims to more or less than one of the combinations of categories of invention set forth in paragraph (b), unity of invention might not be present.

However, it is noted that unity of invention is considered lacking under 37 CFR 1.475(a) and (b). Therefore, since the claims are drawn to more than a product, and according to 37 CFR 1.475 (e) the determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim.

The claims lack unity of invention and should be limited to only a product, or a process for the preparation, or a use of the said product. In the instant case, Groups I-III are drawn to various products, processes of making, and methods of use, and the final products do not contain a common technical feature or structure, and do not define a contribution over the prior art, i.e., similar amines compounds of TenBrink et al. Moreover, the examiner must perform a commercial database search on the subject matter of each group in addition to a paper search, which is quite burdensome to the examiner.

Claims 1-12, in part, embraced in above elected subject matter, are prosecuted in the case. Claims 1-12, in part, not embraced in above elected subject matter, are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

Art Unit: 1626

The requirement is still deemed proper.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 8 and 12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for using compounds of formula (I) for treating hypertension, it does not reasonably provide enablement for using compounds of the formula (I) for treating or preventing glaucoma. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

In the instant case:

The nature of the invention

The nature of the invention of claims 8 and 12 is drawn to compounds with intent methods of use for treating or preventing hypertension or glaucoma.

The state of the prior art and the predictability or lack thereof in the art

The state of the prior art is that the pharmacological art involves screening *in vitro* and *in vivo* to determine which compounds exhibit the desired pharmacological activities (i.e. what compounds can treat which specific diseases by what mechanism). There is no absolute predictability even in view of the seemingly high level of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic or preventive regimen on its face.

The instant claimed invention is highly unpredictable as discussed below:

It is noted that the pharmaceutical art is unpredictable, requiring each embodiment to be individually assessed for physiological activity. *In re Fisher*, 427 F.2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. TenBrink et al. US 7,312,360 disclose amine compounds of formula (I) for treating Alzheimer's disease, see columns 1-11. Applicants are claiming compositions with intent methods of use using compounds of formula (I) effective to "treating or preventing glaucoma" *in vivo*.

Art Unit: 1626

As such, the specification fails to enable the skilled artisan to use the compounds of claims 8 and 12 effective to “treating or preventing glaucoma” *in vivo*.

In addition, there is no established correlation between *in vitro* activity and accomplishing treatment of “treating or preventing glaucoma”, *in vivo*, and those skilled in the art would not accept allegations in the instant specification to be reliable predictors of success, and those skilled in the art would not be able to use the compounds of the formula (I) since there is no description of an actual method wherein “treating or preventing glaucoma” *in vivo* in a host is treated.

Hence, one of skill in the art is unable to fully predict possible results from the administration of the compounds of claims 8 and 12 due to the unpredictability of the “treating or preventing glaucoma” *in vivo*. The “treating or preventing glaucoma” *in vivo* is known to have many obstacles that would prevent one of ordinary skill in the art from accepting treating or regimen on its face.

The amount of direction or guidance present and the presence or absence of working examples

The only direction or guidance present in the instant specification is the statement of the instant compounds for treating hypertension, see pages 15-16 of the specification. There are no *in vivo* working examples directly presenting for the treatment or prevention of glaucoma ameliorated by the administration of compounds of the instant invention.

The breadth of the claims

The breadth of the claims is compositions with intent methods of use of the instant compounds effective to “treating or preventing glaucoma” *in vivo*.

The quantity of experimentation needed

The quantity of experimentation needed is undue experimentation. One of skill in the art would need to determine what “treating or preventing glaucoma” *in vivo* would be benefited (i.e., treated or prevented) by the administration of the instant compounds of the instant invention and would furthermore then have to determine which of the claimed methods of use would provide treatment of “treating or preventing glaucoma” *in vivo*, if any.

The level of the skill in the art

The level of skill in the art is high. However, due to the unpredictability in the pharmaceutical art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by *in vitro* and *in vivo* screening to determine which methods of use exhibit the desired pharmacological activity and which diseases would benefit from this activity. Thus, the specification fails to provide sufficient support of the broad use of the pharmaceutical compounds of the instant claims 8 and 12 for the “treating or preventing glaucoma” *in vivo*. As a result necessitating one of skill to perform an exhaustive search for which “treating or preventing glaucoma” *in vivo*, can be treated by what pharmaceutical compounds of the instant claims in order to practice the claimed invention.

Genentech Inc. v. Novo Nordisk A/S (CA FC) 42 USPQ2d 1001, states that “ a

Art Unit: 1626

patent is not a hunting license. It is not a reward for search, but compensation for its successful conclusion" and "patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable".

Therefore, in view of the Wands factors and *In re Fisher* (CCPA 1970) discussed above, to practice the claimed invention herein, a person of skill in the art would have to engage in undue experimentation, with no assurance of success. Deletion of claim 8 and deletion of the limitation "treating or preventing glaucoma" from claim 12 would obviate the rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

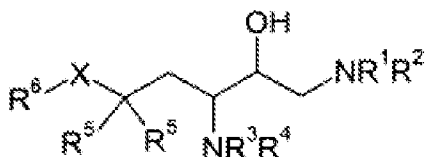
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating

obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over TenBrink et al. WO 2003/050073 or see US 7,312,360. TenBrink et al. '360 is 102(e) reference.

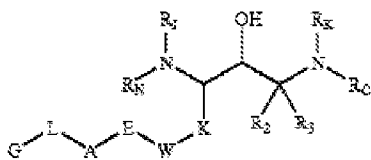
Applicants claim a compound of formula (I), i.e.,



, see claim 1.

Determination of the scope and content of the prior art (MPEP §2141.01)

TenBrink et al. '360 disclose a compound of formula (I), i.e.,



, wherein the variable E, W, L or G is a bond, the variable n is 2, the variable A is aryl, heteroaryl, or heterocycle, see columns 3-8.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the instant claims and TenBrink et al. '360 is that the variable W of TenBrink et al. represents a bond or -S-, -S(O)-, while the instant claims represents a bond at the same position. TenBrink et al. compounds/compositions inherently overlap with the instant invention.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the instant claims 1-12 prima facie obvious **because** one would be motivated to employ the compounds of TenBrink et al. to obtain the instant compounds/compositions of formula (I) and their methods of use. Dependent claims 2-12 are also rejected along with claim 1 under 35 U.S.C. 103(a).

The motivation to obtain the claimed compounds/compositions derives from TenBrink et al. compounds would possess similar activity (i.e., compositions) to that which is claimed in the reference.

Double Patenting

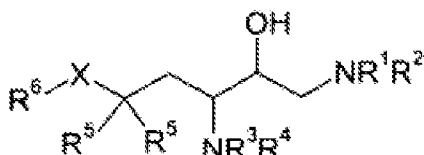
6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

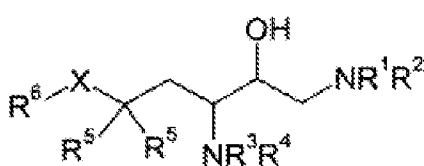
Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 8 of Herold et al. co-pending application No. 11/522,316, 11/488,854 or 10/586,814. Although the conflicting claims are not identical, they are not patentably distinct from each other and reasons are as follows.

Applicants claim a compound of formula (I), i.e.,

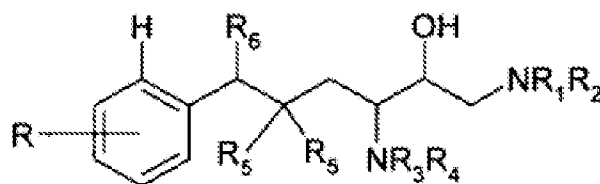


, and their methods of use, see claim 1.

Herold et al. '316, 854 or '814 respectively claim a compounds of formula (I), i.e.,



, or



and

their methods of use.

The difference between the instant claims and Herold et al. '316, '854 or '814 is that Herold et al. '316, '854 or '814 is silent on the methods of use of the instant compounds. Herold et al. '316, '854 or '814 compounds and their methods of use inherently overlap with the instant invention.

One having ordinary skill in the art would find the instant claims 1-12 *prima facie* obvious **because** one would be motivated to employ the processes of Herold et al. '316, '854 or '814 to obtain the instant compounds of formula (I) and their methods of use. Dependent claims 2-12 are also rejected along with claim 1 under the obviousness-type double patenting.

The motivation to obtain the claimed catalyst derives from known Herold et al. '316, '854 or '814 compounds would possess similar activity (i.e., pharmaceutical compositions) to that which is claimed in the reference.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims Objection

7. Claims 1-12 are objected to as containing non-elected subject matter, i.e., heteroaryl, heterocycle, benzofuranyl, pyrimidyl, benzoimidazole, tetrazole, etc. It is suggested that applicants amend the claims to the scope of the elected subject matter as defined on the pages 2-3 *supra*.

8. Claims 1-9 and 12 objected to because of the following informalities: missing a term "A" or "The" at the beginning of each claim respectively. Correction is required.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rei-tsang Shiao whose telephone number is (571) 272-0707. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on (571) 272-0699. The fax phone

Art Unit: 1626

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/REI-TSANG SHIAO /

Rei-tsang Shiao, Ph.D.
Primary Patent Examiner
Art Unit 1626

November 12, 2008

Application/Control Number: 10/593,461
Art Unit: 1626

Page 16